3ISYS-ETHE-8C2FC

INDUSTRIAL 10-PORT MANAGED POE ETHERNET SWITCH WITH 2XGIGABIT COMBO PORTS, SFP SOCKET AND 8X10/100BASE-T(X) P.S.E.

FEATURES

- World's fastest Redundant Ethernet Ring: Sys-Ring (recovery time < 10ms over 250 units of connection)
- Uni-Ring support the other vendor's ring technology in open architecture
- Sys-Chain allow multiple redundant network rings
- Support standard IEC 62439-2 MRP (Media Redundancy Protocol) function
- STP/RSTP/MSTP supported
- 8 ports P.S.E. fully compliant with IEEE802.3af standard, provide up to 15.4 Watts per port
- Provide PoE power on delay function, users can define delay time for PoE power supply
- Support PTP Client (Precision Time Protocol) clock
- Support Modbus/TCP protocol synchronization
- IGMP v2/v3 (IGMC snooping support) for filtering multicast traffic
- Port Trunking for easy of bandwidth management
- SNMP v1/v2c/v3 support for secured network management
- RMON for traffic monitoring
- Support LLDP (Link Layer Discovery Protocol)
- Supports DDM (Digital Diagnostic Monitoring) function
- Event notification through Syslog, Email, SNMP trap, and Relay Output
- Port lock to prevent access from unauthorized MAC address
- Windows utility (System-vision) support centralized management and configurable by Web-based ,Telnet, Console (CLI)
- Support two Gigabit combo ports
- Rigid IP-30 housing design
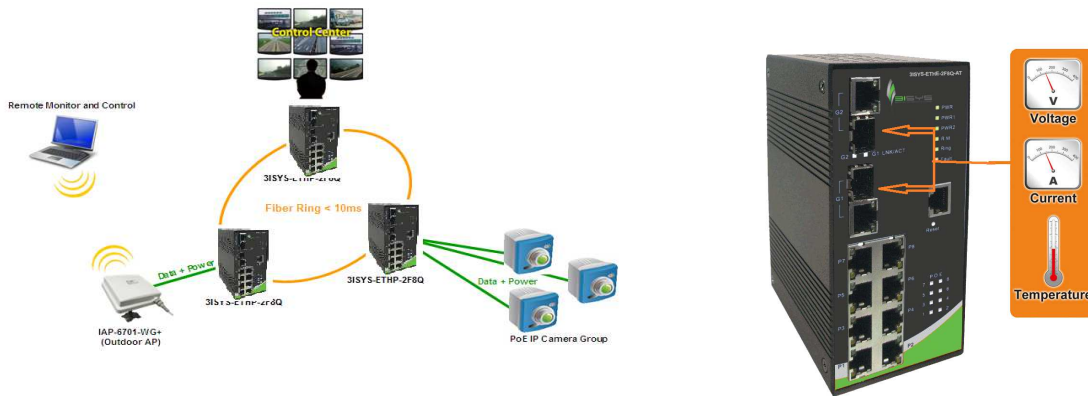- DIN-Rail and wall mounting enabled

3ISYS
INNOVATIVE - INTEGRATED - INTELLIGENT

PRODUCT OVERVIEW

3ISYS-ETHE-8C2FC is managed redundant ring Ethernet switch with 8x10/100Base-T(X) ports with PoE (P.S.E.) function and 2xGigabit combo ports.   With completely support of Ethernet redundancy protocol, Sys-Ring (recovery time < 10ms over 250 units of connection), Uni-Ring, Sys-Chain, MRP and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. Another Uni-Ring technology is also supported which can be applied for other vendor's proprietary ring.   Sys-Chain is the revolutionary network redundancy technology that provides the add-on network redundancy topology for any backbone network, Sys-Chain allows multiple redundant network rings of different redundancy protocols to join and function together as a larger and more robust compound network topology. Sys-Chain providing ease-of-use while maximizing fault-recovery swiftness, flexibility, compatibility, and cost-effectiveness in one set of network redundancy topology.
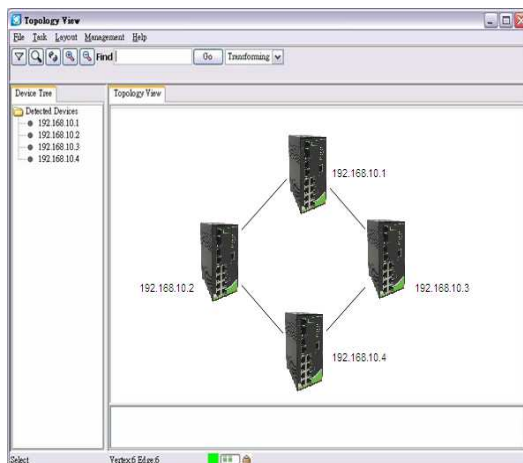
System-vision

3ISYS's switches are intelligent switches. Being different from other traditional redundant switches, 3ISYS provides a set of Windows utility (System-vision) for user to manage and monitor all of industrial Ethernet switches on the industrial network.
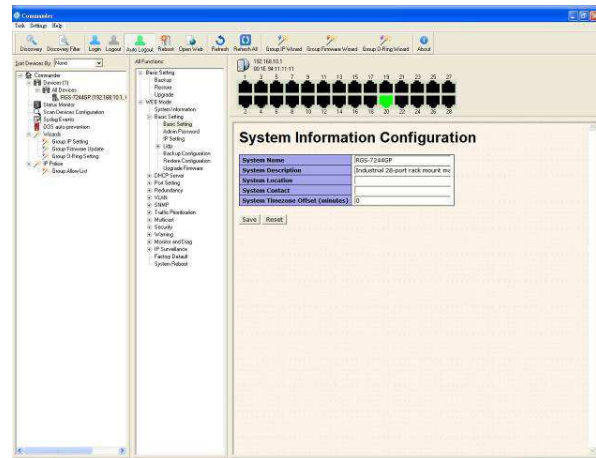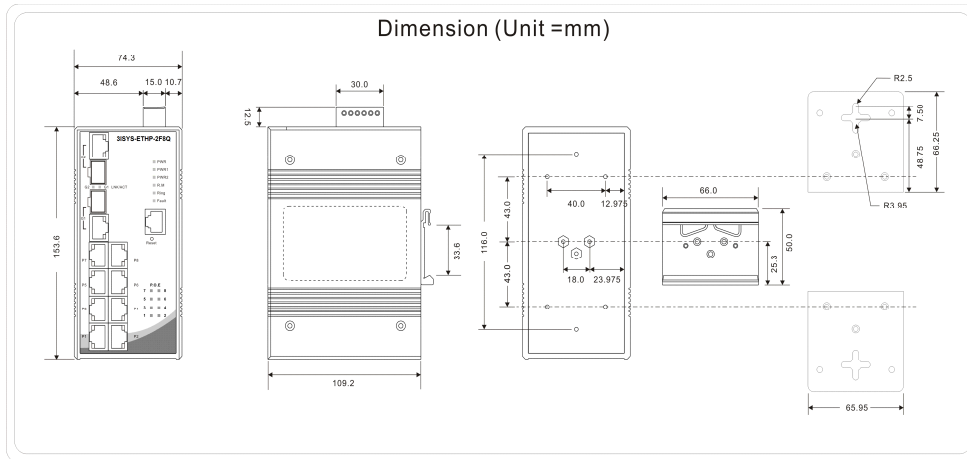

DDM

Network connection

Topology View

Monitoring and Configuration interface

Dimension

Dimension (Unit =mm)

PoE Pin Definition

RJ-45 Pin Definition	
Pin No.	Description
#1	TD+ with PoE Power input +
#2	TD- with PoE Power input +
#3	RD+ with PoE Power input -
#6	RD- with PoE Power input -

Specifications

3ISYS Switch Model	3ISYS-ETHE-8C2FC
Physical Ports	
Gigabit Combo Ports with 10/100/1000Base-T(X) and 100/1000Base-X SFP port	**2**
10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX with P.S.E.	**8**
Technology	
Ethernet Standards	§ IEEE 802.3 for 10Base-T § IEEE 802.3u for 100Base-TX and 100Base-FX § IEEE 802.3z for 1000Base-X § IEEE 802.3ab for 1000Base-T § IEEE 802.3x for Flow control § IEEE 802.3ad for LACP (Link Aggregation Control Protocol) § IEEE 802.1D for STP (Spanning Tree Protocol) § IEEE 802.1p for COS (Class of Service) § IEEE 802.1Q for VLAN Tagging § IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol) § IEEE 802.1s for MSTP (Multiple Spanning Tree Protocol) § IEEE 802.1x for Authentication § IEEE 802.1AB for LLDP (Link Layer Discovery Protocol) § IEEE 802.3af PoE specification (up to 15.4 Watts per port for P.S.E.)
MAC Table	8192 MAC addresses
Priority Queues	4

Processing	Store-and-Forward
Switch Properties	§ Switching latency: 7 us § Switching bandwidth: 5.6Gbps § Max. Number of Available VLANs: 4096 § IGMP multicast groups: 1024 § Port rate limiting: User Define
Security Features	§ Enable/disable ports, MAC based port security § Port based network access control (802.1x) § VLAN (802.1Q) to segregate and secure network traffic § Supports Q-in-Q VLAN for performance & security to expand the VLAN space § Radius centralized password management § SNMP v1/v2c/v3 encrypted authentication and access security
Software Features	§ STP/RSTP/MSTP (IEEE 802.1D/w/s) § Redundant Ring (Sys-Ring) with recovery time less than 10ms over 250 units § TOS/Diffserv supported § Quality of Service (802.1p) for real-time traffic § VLAN (802.1Q) with VLAN tagging and GVRP supported § IGMP Snooping for multicast filtering § Port configuration, status, statistics, monitoring, security § SNTP for synchronizing of clocks over network § Support **PTP Client** (Precision Time Protocol) clock synchronization § DHCP Server / Client support § Port Trunk support § MVR (Multicast VLAN Registration) support § Modbus TCP
Network Redundancy	§ Sys-Ring § Uni-Ring § Sys-Chain § MRP § STP / RSTP / MSTP
Warning / Monitoring	§ Relay output for fault event alarming

System	§ Syslog server / client to record and view events
	§ Include SMTP for event warning notification via email
	§ Event selection support
DDM Function	Voltage / Current / Temperature
RS-232 Serial Console Port	RS-232 in RJ45 connector with console cable. 9600bps, 8, N, 1
LED indicators	
Power/PoE Indicator	Green : Power LED x 3, Green : PoE LED x 8
Sys-Ring Indicator	Green : Indicate system operated in Sys-Ring mode
R.M. indicator	Green : Indicate system operated in Sys-Ring Master mode
Fault indicator	Amber : Indicate unexpected event occurred
10/100Base-T(X) RJ45 Port Indicator	Green for port Link/Act. Amber for Duplex/Collision
10/100/1000Base-T(X) RJ45 Port Indicator	Green for Link/Act. Amber for 100Mbps indicator
100/1000Base-X Fiber Port Indicator	Green for port Link/Act.
Fault contact	
Relay	Relay output to carry capacity of 1A at 24VDC
Power	
Redundant Input Power	Dual DC inputs. 48VDC on 6-pin terminal block
Power Consumption (Typ.)	9 Watts (power consumption of P.S.E. is not included)
Overload Current Protection	Present
Reverse polarity protection	Not Presented
Physical Characteristic	
Enclosure	IP-30
Dimension (W x D x H)	74.3 (W) x 109.2 (D) x 153.6 (H) mm (2.93 x 4.3 x 6.05 inch)
Weight (g)	1100 g
Environmental	
Storage Temperature	-40 to 85°C (-40 to 185°F)
Operating	-40 to 70°C (-40 to 158°F)

Temperature	
Operating Humidity	5% to 95% Non-condensing
Regulatory approvals	
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6
Safety	EN60950-1
Warranty	1 year

Ordering Information

3ISYS®-AAAA-C- FC

Module Identifier	Number of 10/100 Base-T(X) Ports	Number of 100/1000Base-X SFP ports
Fast Ethernet, ETHE	8	2

Items Included

- **3ISYS-ETHE-8C2FC x 1**
- **DIN-Rail Kit x 1**
- **3ISYS Tool CD x 1**
- **Wall-mount Kit x 1**
- **Quick Installation Guide x 1**
- **Console Cable x 1**

Optional Accessories

- **System-vision M5C : Powerful Network Management Windows Utility Suit, 500 IP devices**
- **3ISYS-PWR-75-48 : 75 Watts DIN-Rail power supply**
- **3ISYS-SFP-100 : 100Mbps SFP optical transceiver**
- **3ISYS-SFP-1G : 1Gbps SFP optical transceiver**
- **3ISYS-PWR-120-48 : 120 Watts DIN-Rail power supply**

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All specifications are subject to change without further notice. All features with * mark will be available by firmware upgrade.